



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

DEC 17 2013

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Derek Nicholls
Senior Vice President, Technical
Essroc Italcementi Group
3251 Bath Pike
Nazareth, PA 18064

Re: Response to Essroc SCR Pilot Study Report

Dear Mr. Nicholls:

On July 31, 2013, Essroc Italcementi Group ("Essroc") submitted an SCR Pilot Study Report ("Pilot Study Report") to the United States Environmental Protection Agency ("EPA") pursuant to Paragraph 19 and Appendix B of the Consent Decree entered on February 16, 2012 ("Consent Decree"). In the Pilot Study Report, Essroc concluded that SCR is not feasible at the Logansport kilns. According to Paragraphs 44 and 46 of the Consent Decree, EPA may disapprove any report submitted under the Consent Decree. Paragraph 46 requires Essroc to correct all deficiencies found in a disapproved report and to subsequently resubmit an updated report. Pursuant to Paragraph 44, EPA disapproves the Pilot Study Report for the reasons identified in this letter.

The Consent Decree establishes the requirements of the SCR system to be used in the pilot study. These are mandatory obligations under the Consent Decree. Appendix B Section III requires Essroc to submit a report detailing the results of the pilot study from the SCR system designed according to the parameters detailed in Section II.

Appendix B, Section II, Paragraph 3 of the Consent Decree states that Essroc "*shall design . . . a pilot-scale *in situ* [SCR] system in order to evaluate the system performance at the Logansport cement kilns. The system *shall be designed* to provide Essroc with the information necessary to evaluate the SCR for future use at the Logansport facility.*" Here, the submitted Pilot Study Report is deficient because it does not contain sufficient information to evaluate the SCR for future use. Evaluation of feasibility would require valid data to demonstrate the NO_x removal efficiency. Your Pilot Study Report states that there are "no valid data" to estimate removal

efficiency.”¹ Therefore EPA is unable to determine whether SCR is feasible at the Logansport kilns.

In addition, the information provided by Essroc indicates that the design of the SCR system tested did not meet the requirements of Appendix B of the Consent Decree. Specifically, the system was not designed to effectively reduce NO_x while accounting for adverse effects such as plugging due to fine particulate matter, and deactivation of catalyst.

Specific deficiencies in the design of the design of the SCR system include the following. First, the SCR system used during the pilot study was not designed to handle a high concentration of SO_x while operating at temperatures typical of the Logansport Kiln 1 outlet. SO_x loading to the SCR was uncharacteristically high during the first month of the study, likely accelerating the deactivation of the catalyst. Second, there were no procedures in place to address catalyst deactivation due to excess SO_x. Third, the SCR system was not designed to keep the fine particulate entrained in the system dry. Because the fine particulate was exposed to moisture, it plugged the catalyst bed and made valid data collection nearly impossible after approximately February 2013, a month into the study. Essroc should have kept the particulate dry and/or installed a system to clean the catalyst online while in operation.

In addition to the design deficiencies, there were instances of poor data collection during the SCR study period that prevent proper analysis of system performance. The NO_x and ammonia monitors used during the study did not consistently produce valid data. Essroc’s report indicates that inlet ammonia concentration was reading too high at certain times² and that valid data after February 2013 was collected less than 50% of the time.³ The SCR operating parameters were affected by the lack of proper monitoring during the study. This may have caused adverse reactions to occur in the SCR system during the study, thereby adversely affecting system performance.

Pursuant to Paragraph 46, Essroc must correct the deficiencies in its SCR Pilot Study Report by conducting a new pilot study using an SCR system designed to ensure successful operation according to the parameters set forth in Appendix B of the Consent Decree Accordingly, Essroc shall:

- By February 15, 2014, submit a design report to the EPA outlining the design for a new SCR Pilot Study. Such design shall include, the following general parameters:
 - SCR catalyst designed to address the specific conditions found at the Logansport kiln outlet, including SO₂ concentration and temperature.
 - At least 2 bids from outside vendors with sufficient experience in designing and installing SCR systems.

¹ Pilot Study Report, at 9

² Pilot Study Report, Appendix A, at 6

³ Id at 1

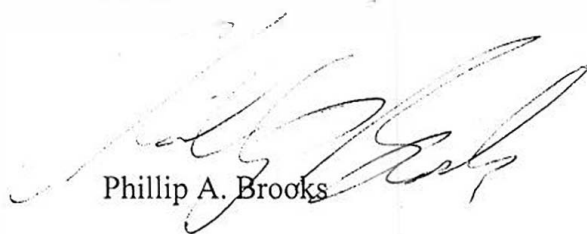
- Sacrificial catalyst and an on-line soot blowing system or an explanation from the selected catalyst vendor as to why these systems are not to be implemented.
- Procedures to be used to promote fully successful SCR operation, including the procedure used to maintain a dry environment within the system and to isolate the system during startup, shutdown and malfunction events.
- Upon the EPA's approval of the design report, conduct a second "SCR Pilot Study" at Logansport Kiln 1 for a period of at least 4 months and no more than 6 months.
- Upon completion of the new SCR Pilot Study, submit a revised SCR Pilot Study Report pursuant to the Consent Decree.

To ensure that the corrected report satisfies the requirements of the Consent Decree, we encourage Essroc to consult with EPA during the development of the design report.

In addition, we understand that Paragraphs 19(b) and 19(c) establish September 30, 2014 as the deadline for installing either an SCR or an SNCR at Logansport Kiln #1, and Paragraphs 19(d) and 19(e) establish September 20, 2015 as the deadline for installing either an SCR or an SNCR at Logansport Kiln #2. EPA will agree to work with Essroc to extend these deadlines, in order to accommodate the need for a second SCR Pilot Study and revised SCR Pilot Study Report

Please contact either Shaun Burke (202-564-1039) or Seema Kakade (202-564-2416) to discuss this matter.

Sincerely,



Phillip A. Brooks

cc: Philip J. Schworer, Esq., Frost, Brown & Todd